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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Takao Ikuno

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EXAMINER

RUST, ERIC A

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/598,513	<b>Applicant(s)</b> IKUNO ET AL.	
	<b>Examiner</b> ERIC A. RUST	<b>Art Unit</b> 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/01/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 1-17 are pending in this application.

#### ***Priority***

2. Acknowledgment is made of Applicants' claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy of Application No. 2004-059232, filed on March 03, 2004, in the Japanese Patent Office, has been received by the Office.

#### ***Drawings***

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the Applicants will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Specification***

4. The abstract of the disclosure is objected to because it contains more than 150 words. See MPEP § 608.01(b). Correction is required.

Art Unit: 2625

Applicants are reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The disclosure is objected to because of the following informalities:

- Pg. 9, it appears that "processing unit 310," recited in line 24, should recite processing units 310; and
- Pg. 13, it appears that "310c," recited in line 11 and 14, are typographical errors and should recite "310d."

Appropriate correction or an explanation of why the Examiner is incorrect is required.

### ***Claim Objections***

6. Claim 15 is objected to because of the following informalities:

**In regard to claim 15**, the claim should depend from either claim 13 or 14, and not claim 7, as it currently does. The Examiner recommends amending the claim to depend from claim 13, and the Examiner will treat the claim as such.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 6 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regards as the invention.

**In regard to claims 6 and 12**, “wherein said hardware-implemented code converting units are adapted so as to be used jointly by the request-source task units of said second unit group,” recited in lines 1-3 of claim 6, and lines 1-3 of claim 12, is not clearly understood rendering the claims indefinite because it does not spell out explicitly the exact function of the claim limitation. For example, the Examiner is unable to determine what it exactly means to be used jointly, as it is recited in the claims. For purposes of examination, the Examiner will interpret these recitation to mean “wherein said hardware-implemented code converting units are adapted so as to be used by the

Art Unit: 2625

request-source task units of said second unit group.” That is, the Examiner will ignore the term “jointly.”

***Claim Rejections - 35 USC § 101***

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 1-3 and 13-17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

**In regard to claims 1-3**, the claims define an apparatus. However the bodies of the claims lack definite structure indicative of a physical apparatus. Furthermore, the specification indicates that the invention may be embodied as pure software (see specification at, for example, pg. 26, lines 2-5). Therefore, the claims as a whole appear to be nothing more than an “apparatus” of software elements, thus defining functional descriptive material per se.

Functional descriptive material may be statutory if it resides on a “computer-readable medium or computer-readable memory”. The claim(s) indicated above lack structure, and do not define a computer readable medium and are thus non-statutory for that reason. When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the

Art Unit: 2625

descriptive material to be realized. The scope of the presently claimed invention encompasses products that are not necessarily computer readable, and thus NOT able to impart any functionality of the recited program.

The examiner recommends:

1. Amending the claim(s) to embody the program on “computer-readable medium” or equivalent; assuming the specification does NOT define the computer readable medium as a “signal”, “carrier wave”, or “transmission medium” which are deemed non-statutory; or

2. Adding structure to the body of the claim(s) that would clearly define a statutory apparatus.

Any amendment to the claim(s) should be commensurate with its corresponding disclosure.

**In regard to claims 13-17**, the claims define a program embodying functional descriptive material (i.e., program code). However, the claims do not define a “computer-readable medium or computer-readable memory” and are thus non-statutory for that reason (when functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized). The scope of the presently claimed invention encompasses products that are not necessarily computer readable, and thus NOT able to impart any functionality of the recited program.

The Examiner recommends amending the preamble of claim 13 to recite "A non-transitory computer readable medium having an image processing program encoded thereon, the image processing program comprising:

The Examiner further recommends amending the preamble of claims 14-17 to be commensurate in scope with the preamble of claim 13, of which claims 14-17 depend (see objection to claim 15 above).

### ***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-3, 7-9, and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,943,508 to Penney et al. (hereinafter, Penney).

**In regard to claims 1, 7, and 13**, Penney discloses an image processing apparatus (**Penney, Fig. 1, and col. 1, lines 49-52**) comprising:

a plurality of code converting units (**Penney, Fig. 1, item 14**) for executing coding and decoding of image data (**Penney, col. 2, lines 19-22**);

Art Unit: 2625

a plurality of request-source task units (**Penney, Fig. 1, item 11**) for requesting any of said plurality of code converting units to perform a code conversion of image data (**Penney, col. 2, lines 19-24 and 35-38**), the number of task units being greater than the number of code converting units (**Penney, col. 2, lines 13-15**) and having priorities that depend on their respective tasks (**Penney, col. 2, lines 47-53, one of the outputs of the input matrix is assigned to one of the input sources, the Examiner interprets this source as having a high priority with the other sources having lower priority**); and

an assigning unit (**Penney, Fig. 1, item 18**) for assigning one of said plurality of code converting units to a processing request from one of said plurality of request-source task units having a high priority (**Penney, col. 2, lines 47-53, one of the outputs of the input matrix is assigned to one of the input sources, the Examiner interprets this source as having a high priority with the other sources having lower priority**) and, if there is an idle code converting unit among the plurality of code converting units, assigning the idle code converting unit to a processing request from one of said plurality of request-source task units having a low priority (**Penney, col. 3, lines 13-16, and 46-52, assigned as needed**).

**In regard to claims 2, 8, and 14**, which depend from claims 1, 7, and 13, respectively, Penney discloses wherein said code converting units have one-to-one correspondence to the request-source task units having the high priority (**Penney, col.**

Art Unit: 2625

**2, lines 47-53, one of the outputs of the input matrix is assigned to one of the input sources, the Examiner interprets this source as having a high priority); and**

said assigning unit assigns the corresponding code processing units in accordance with the processing requests from the request-source task units having the high priority (**Penney, col. 2, lines 47-53, one of the outputs of the input matrix is assigned to one of the input sources, the Examiner interprets this source as having a high priority).**

**In regard to claims 3, 9, and 15, which depend from claims 1, 7, and 13, respectively (see objection to claim 15 above), Penney discloses wherein code converting units, the number of which is smaller than the number of the request-source task units having the low priority, correspond to these request-source task units having the low priority (Penney, col. 2, lines 13-15 and 47-53, one of the outputs of the input matrix is assigned to one of the input sources, and one of the decoders is coupled to the output, the remaining decoders would be distributed and assigned as needed to the sources, see Penney, col. 3, lines 13-16, and 46-52 ); and**

said assigning unit assigns said code converting units in a prescribed order to the processing requests from the request-source task units having the low priority (**Penney, col. 2, lines 13-15 and 47-53, one of the outputs of the input matrix is assigned to one of the input sources, and one of the decoders is coupled to the output, the remaining decoders would be distributed and assigned as needed to the sources, see Penney, col. 3, lines 13-16, and 46-52).**

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 4, 10, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Penney in view of U.S. Patent No. 6,587,735 B1 to Yaguchi.

**In regard to claims 4, 10, and 16**, which depend from claims 3, 9, and 15, respectively, Penney does not specifically disclose wherein said code converting units are constituted by software-implemented code converting units for executing code conversion by software and hardware-implemented code converting units for executing code conversion by hardware; and said assigning unit assigns said software-implemented code converting units to the processing requests of the request-source task units.

Yaguchi, however, discloses code converting units constituted by software-implemented code converting units for executing code conversion by software and hardware-implemented code converting units for executing code conversion by hardware (**Yaguchi, col. 18, lines 58-61**); and said assigning unit assigns said software-implemented code converting units to the processing requests of the request-source task units. (**Yaguchi, col. 19, lines 32-34**).

Art Unit: 2625

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Yaguchi with the teachings Penney for having code converting units constituted by software-implemented code converting units for executing code conversion by software and hardware-implemented code converting units for executing code conversion by hardware; and said assigning unit assigns said software-implemented code converting units to the processing requests of the request-source task units in order to execute data at high speed and in order to select the optimum processor at processing time (**Yaguchi, col. 1, lines 54-63**).

15. Claims 5-6, 11-12, and 17 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Penney and Yaguchi, in view of U.S. Patent Application Publication No. 2005/0047666 A1 to Mitchell et al. (hereinafter, Mitchell).

**In regard to claims 5, 11, and 17**, which depend from claims 4, 10, and 16, respectively, Penney disclose wherein said request-source task units having the high priority are classified into a first unit group processed and a second unit group (**Penney, col. 2, lines 62-64, the “advance assignment”**).

Penney does not disclose wherein the first unit group is processed by said software-implemented code converting units and the second unit group processed by said hardware-implemented code converting units.

Yaguchi, however, discloses a first unit group being processed by software-implemented code converting units (**Yaguchi, col. 18, line 58 - col. 19, line 36, the**

Art Unit: 2625

**first group is processing that requires more than a predetermined time, see specifically, Yaguchi, col. 19, lines 21-26, and lines 27-34)** and a second unit group processed by hardware-implemented code converting units (**Yaguchi, col. 18, line 58 - col. 19, line 36, the second group is processing that requires less than a predetermined time, see specifically, Yaguchi, col. 19, lines 21-26).**

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Yaguchi with the teachings Penney for having a first unit group being processed by said software-implemented code converting units, and a second unit group processed by said hardware-implemented code converting units in order to execute data at high speed and in order to select the optimum processor at processing time (**Yaguchi, col. 1, lines 54-63).**

Neither Yaguchi nor Penney specifically disclose the second unit group processed by said hardware-implemented code converting units via said software-implemented code converting units.

Mitchell, however, discloses tasks being processed by hardware-implemented code converting units via software-implemented code converting units (**Mitchell, Abstract, lines 9-13).**

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Mitchell with the teachings of Yaguchi and Penney for having tasks being processed by hardware-implemented code converting units via software-implemented code converting units in order to prepare data for non-compliant hardware decoders (**Mitchell, Abstract, lines 11-13).**

**In regard to claims 6 and 12**, which depend from claims 5 and 11, respectively, Yaguchi discloses wherein said hardware-implemented code converting units are adapted so as to be used jointly by the request-source task units of said second unit group (**Yaguchi, col. 19, lines 21-26, processing that requires less than a predetermined time is processed by hardware, accordingly, said hardware-implemented code converting units are adapted so as to be used by the request-source task units of said second unit group, see 112 2<sup>nd</sup> paragraph rejection above**).

### ***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to Applicants' disclosure and is as follows:

Sim et al., U.S. Patent Application Publication No. 2004/0067739 A1, teaches implementing decoders in hardware and/or software.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC A. RUST whose telephone number is (571)-270-3380. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

Art Unit: 2625

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benny Tieu can be reached on (571)-272-7490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ERIC A. RUST/

Examiner, Art Unit 2625

10/15/2009

/Benny Q Tieu/

Supervisory Patent Examiner, Art Unit 2625